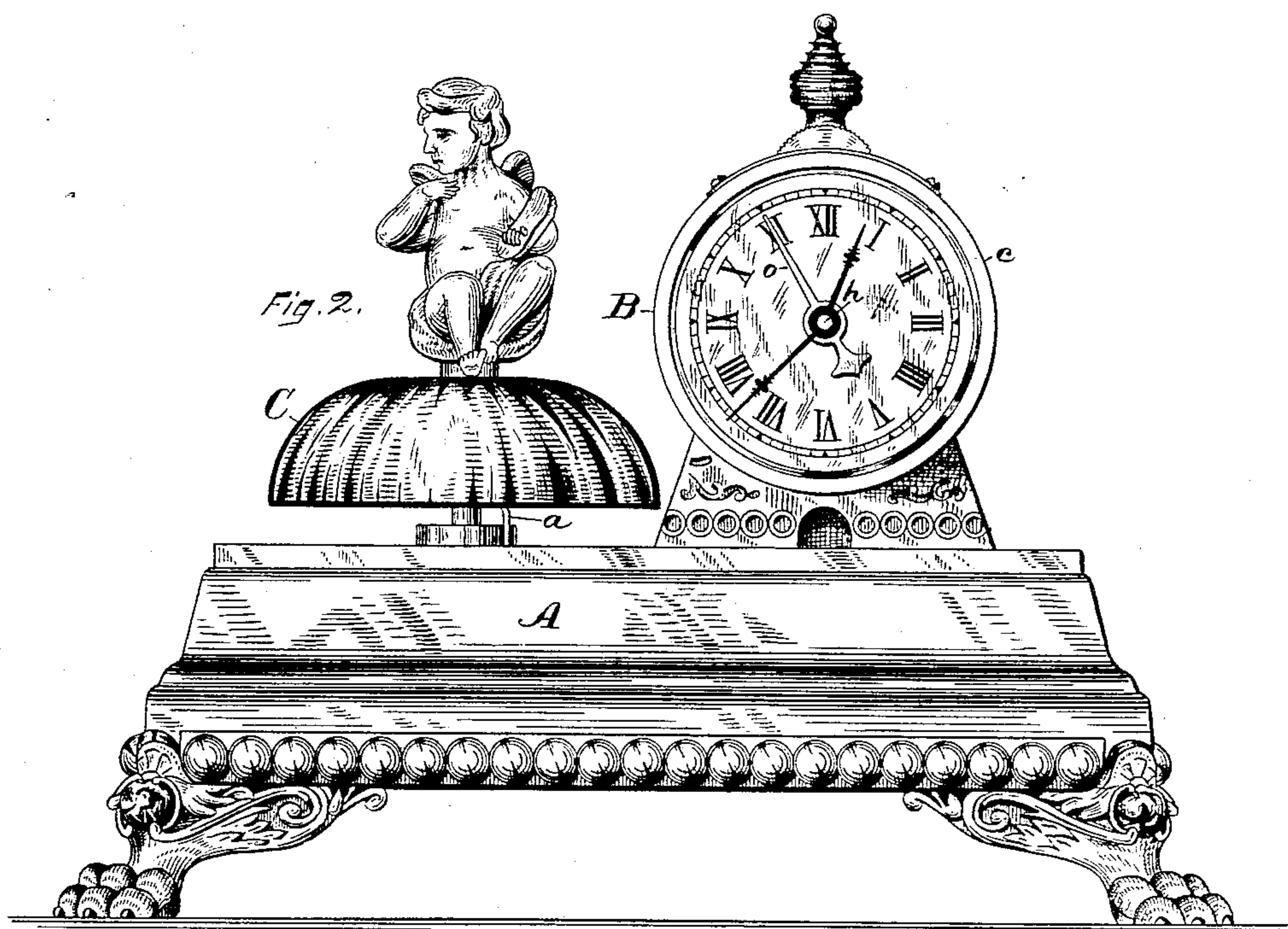
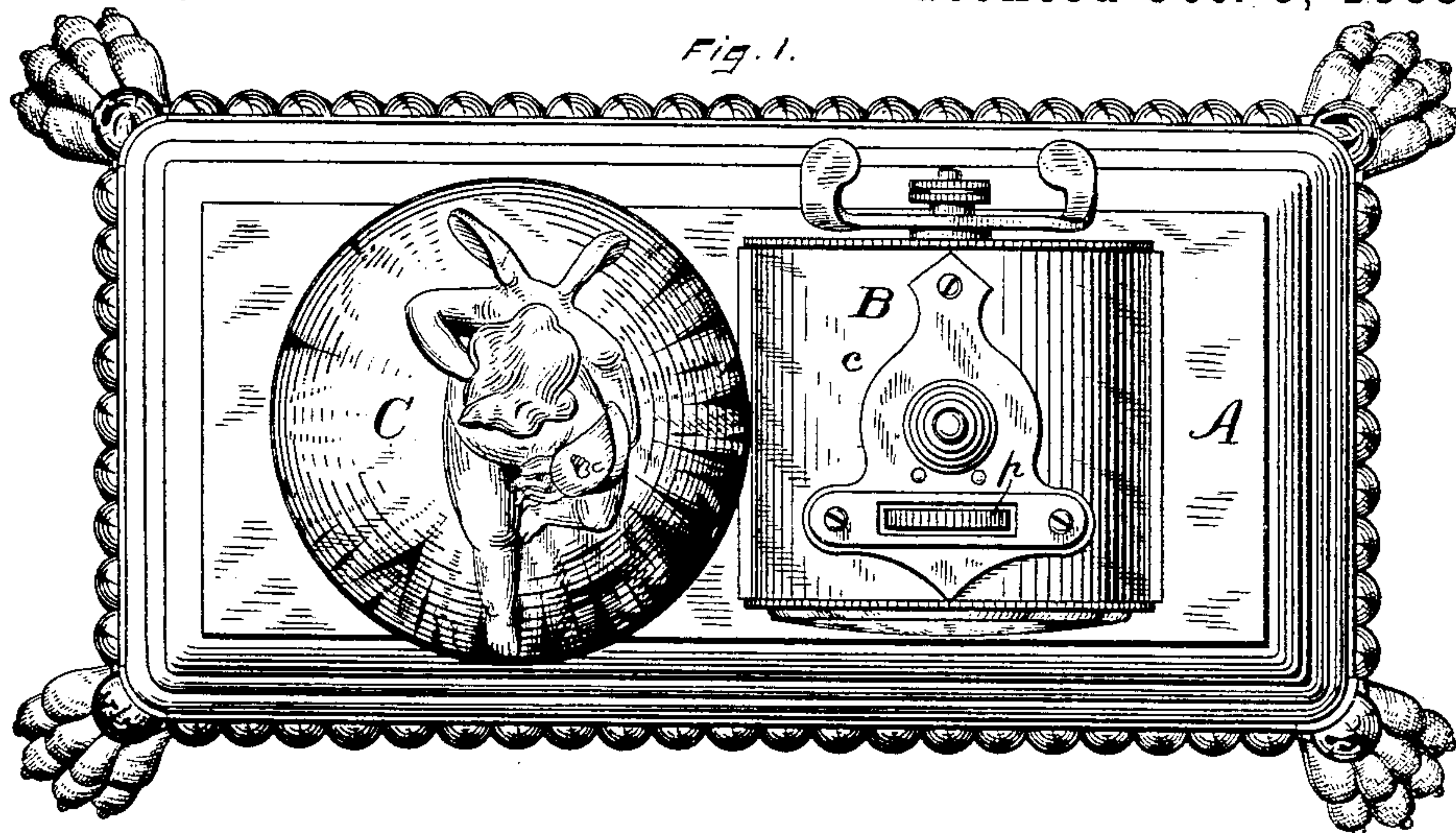


A. M. LANE.

ALARM CLOCK.

No. 390,786.

Patented Oct. 9, 1888.



Witnesses.

John Edwards Jr.
W. H. Whiting.

Inventor.

Almeron M. Lane.

By James Shepard. *Att'y.*

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Fig. 3.

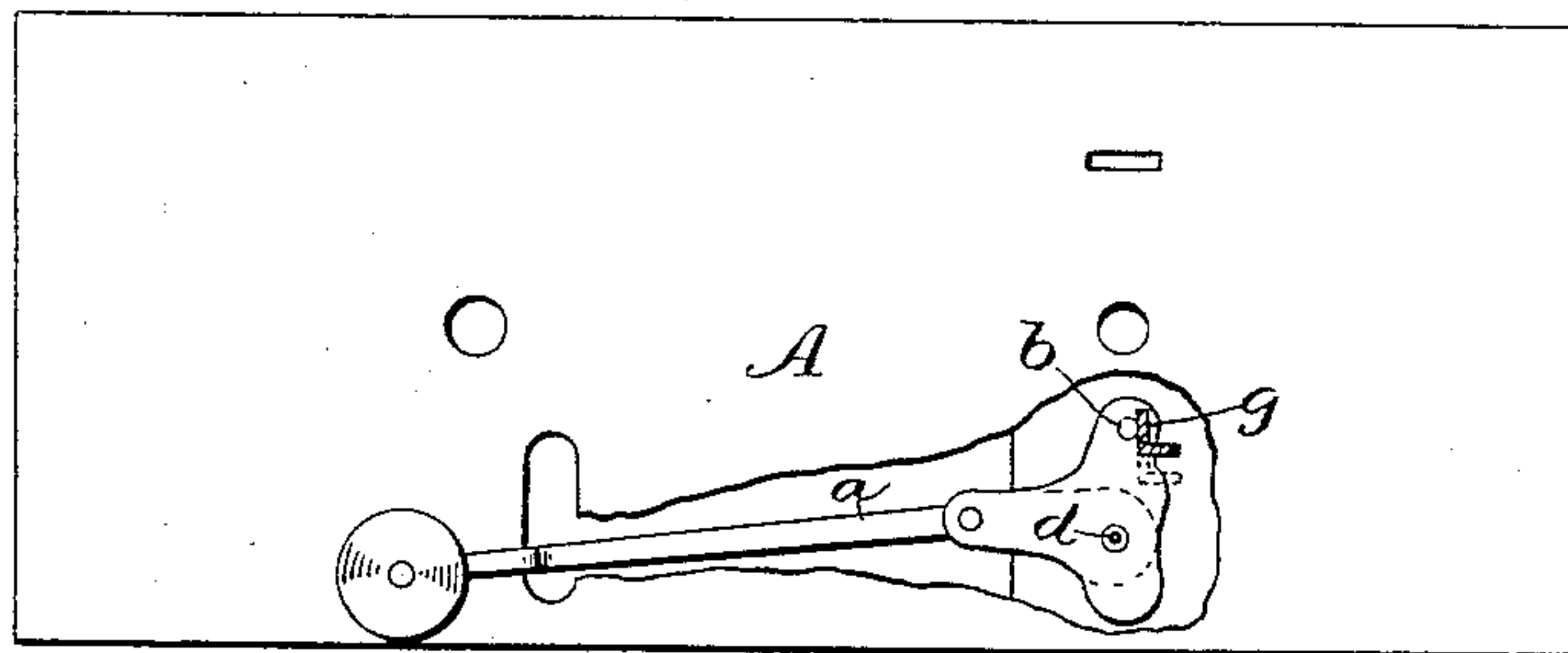


Fig. 4.

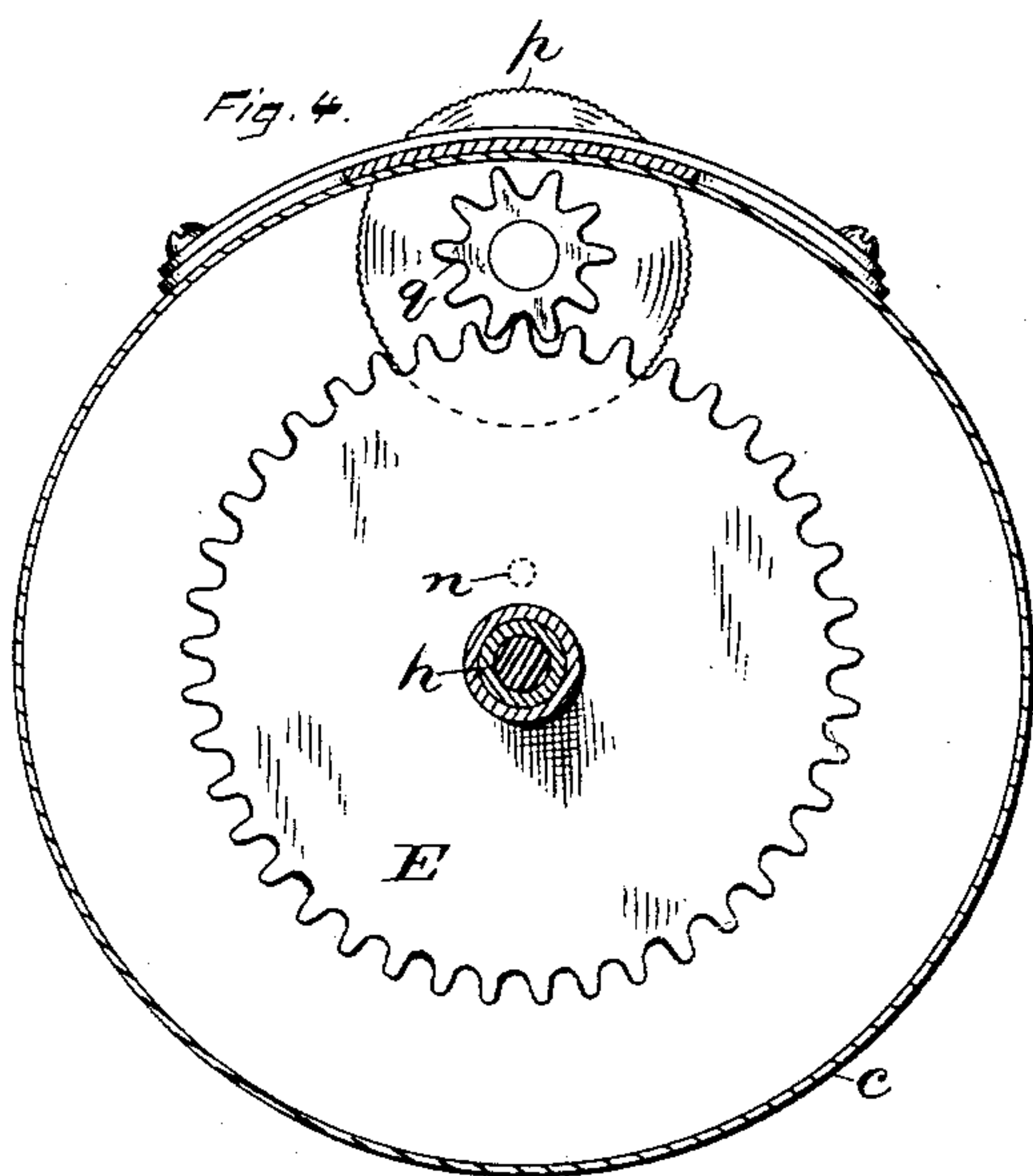


Fig. 5.

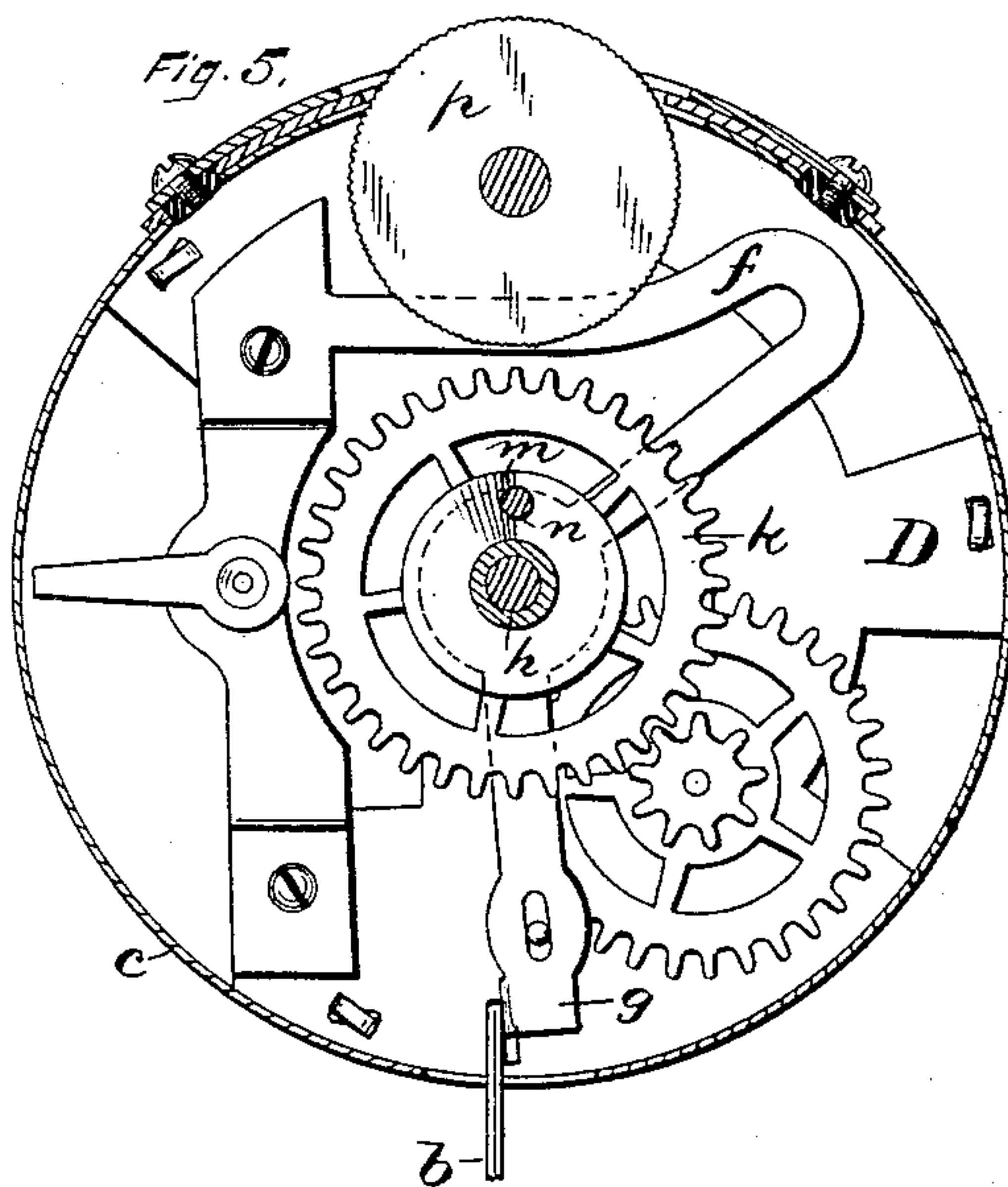
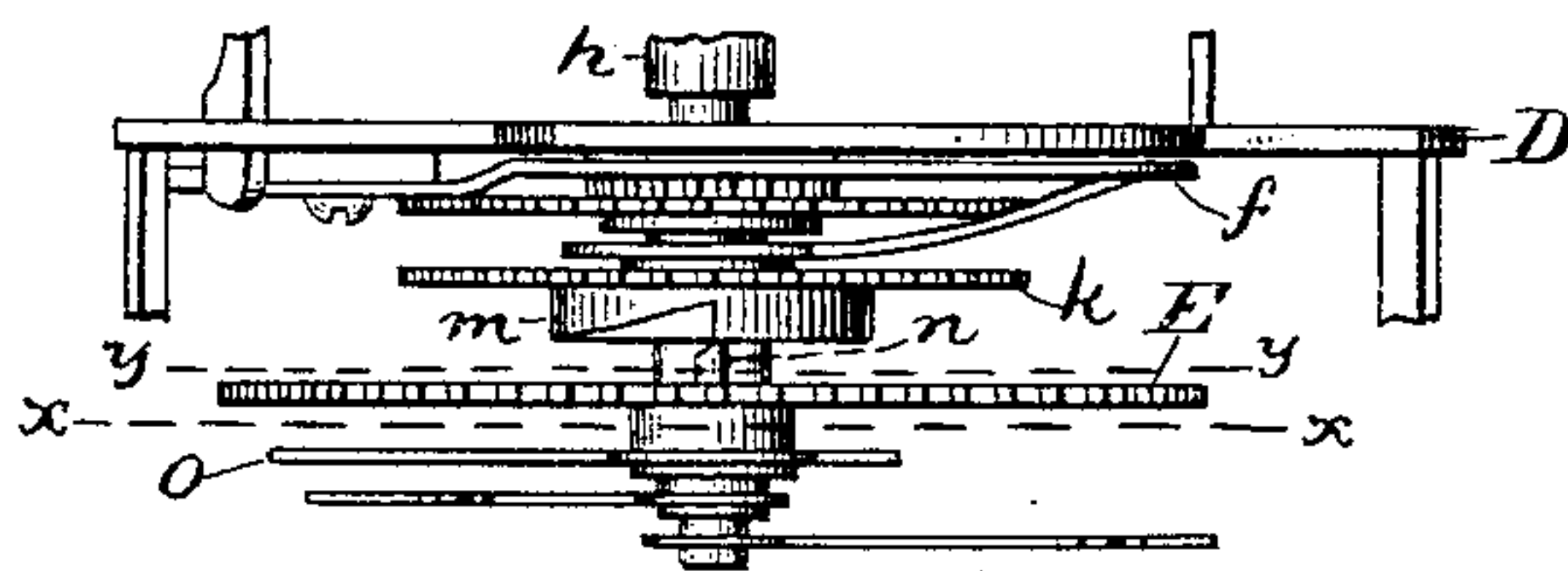


Fig. 6.



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W. H. Whiting.

Inventor.

Almeron M. Lane.
By James Shepard. Atty.

UNITED STATES PATENT OFFICE.

ALMERON M. LANE, OF MERIDEN, CONNECTICUT.

ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 390,786, dated October 9, 1888.

Application filed May 12, 1888. Serial No. 273,645. (No model.)

To all whom it may concern:

Be it known that I, ALMERON M. LANE, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Alarm-Clocks, of which the following is a specification.

My invention relates to improvements in alarm-clocks; and the principal object of my invention is to obtain a long-running and loud-sounding alarm for a small-sized clock.

In the accompanying drawings, Figure 1 is a plan view of my clock. Fig. 2 is a front elevation thereof. Fig. 3 represents in plan view the top of the base, the alarm-hammer, and part of the alarm-movement, and a horizontal section of the lower end of the holding and releasing arm. Fig. 4 is a sectional view on line *xx* of Fig. 6 of the clock-case, the center shaft, and a front elevation of the setting-wheels. Fig. 5 is a sectional view on line *yy* of Fig. 6 of the clock case and movement, showing a front elevation of portions of the clock-movement and alarm setting and releasing mechanism; and Fig. 6 is a plan view of the substantial parts thereof.

A designates the base, preferably of an oblong form and in any pleasing design, upon one end of which I mount a small clock, B, on rigid supports, and upon the other end of said base I mount an alarm-bell, C. This bell may be of any desired size, and can be made as large, or even larger than the clock, and it is preferably surmounted by some ornamental cap or figure, so as to balance in appearance the clock at the other end of the base and impart to the whole a symmetrical and pleasing effect. The clock is provided with a suitable alarm setting and releasing mechanism within its case, which, in connection with an alarm-movement, may be operated to release the alarm at any predetermined time for which it is set, as in ordinary alarm-clocks.

The alarm-striking mechanism may be of any ordinary construction, and I consider it unnecessary to fully illustrate said mechanism. I secure this alarm mechanism within the base immediately under the clock at the end of said base, so that its hammer and hammer-lever *a*, Fig. 3, swing upon a vertical pivot, and projecting upwardly from a part of the hammer-lever is a vertical rod, *b*, which projects through

a hole in the clock-case *c*. The hammer-lever being pivoted at *d*, Fig. 3, causes the vertical rod *b* to vibrate laterally from right to left when the hammer is oscillated by the alarm-movement. The outer end of the hammer-lever is bent upwardly and extends lengthwise with the base and up through a slot, as shown in Figs. 2 and 3, to bring the ball of the hammer within the bell C at the opposite end of said base.

To one of the movement-plates D, I secure a spring, *f*, of a peculiar form, (shown most clearly in Fig. 5,) which spring extends downwardly around the center shaft and terminates at its lower end in the holding and releasing arm *g*. This spring, at the point where it surrounds the center shaft, *h*, bears against one of the dial-wheels *k* with a constant tendency to press said wheel forward. Upon the front of this dial-wheel *k*, I form a side-acting cam, *m*, Figs. 5 and 6. In front of this dial-wheel *k*, I arrange a setting-wheel, E, said wheel being provided upon the side which faces the cam *m* with a trip-pin, *n*, Figs. 5 and 6, said pin also being shown by a broken circle in Fig. 4. The hub of this wheel E extends forward through the clock-dial and is provided with the alarm-setting pointer *o*. On the upper part of the clock-case in suitable bearings I arrange a setting-button, *p*, upon the side of which is a pinion, *q*, that meshes into the teeth of the setting-wheel E, whereby by turning the setting-button *p* the alarm-pointer *o* may be set as desired. This setting button and pinion and their relation to the clock-movement I intend to make the subject of another application.

When the pin *n* bears upon the plain face of the cam *m*, the holding and releasing arm *g* of the spring *f* is held within the path of the rod *b*, which projects up from the hammer-lever, so that said hammer-lever is held and prevented from operating, the holding-arm being in the position relatively to said rod which is illustrated in section in Fig. 3. When the time-movement indicates the time for which the alarm was set, the pin *n* slips off the shoulder of the cam *m*, thereby throwing the holding and releasing arm *g* forward out of the path of the vertical rod *b* on the hammer-lever, as indicated by the broken lines in Fig. 3, so that the hammer-lever is free to operate under the influence of the alarm-movement.

It will be seen that the holding and releasing arm within the clock-case and the vibrating rod *b* of the alarm-movement are connected only by placing them side by side, whereby the parts may be separately constructed and are conveniently put together or separated, when desired, for repairs or other purpose. By my invention I also produce a neat and attractive alarm-clock, with the setting and releasing mechanisms within the case, the alarm-movement within the base at one end, and having a long hammer extending to the bell at the opposite end of the base and concealed from view, whereby, in addition to the general appearance, a loud-sounding alarm with a small clock is produced.

I do not wish to limit myself to the specific construction of the alarm setting and releasing mechanism, as a clock having setting and releasing mechanism within its case and alarm-bell may be separately mounted side by side on a common base and operated in connection with other forms of alarm setting and tripping mechanism.

An alarm-movement and a bell have heretofore been mounted within a clock-case and upon the outside of the case.

I am also aware of the prior patents for time-alarms to B. E. Freymouth, December 22, 1814, and to L. Baum, No. 73,154, January 7, 1868, and the same are hereby disclaimed.

I claim as my invention—

The herein-described alarm-clock, consisting of the base *B*, the clock-case secured to the top of said base by rigid supports, the time movement and alarm setting and releasing mechanism within said clock-case, and the alarm-movement set within said base at one end and operatively connected with the releasing mechanism within the clock-case, the hammer of said alarm-movement extending lengthwise with the base to a bell at the opposite end thereof, substantially as described, and for the purpose specified.

ALMERON M. LANE.

Witnesses:

WILBUR F. DAVIS,
WILLIAM C. MUELLER.